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EXAMINER

WU, XIAO MIN

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 13

Application Number: 09/153,230
Filing Date: September 15, 1998
Appellant(s): Tognazzini Bruce

Mailed

JAN 23 2004

Technology Center 2600

Eugene J. Molinelli
For Appellant

SUPPLEMENTAL EXAMINER'S ANSWER

Pursuant to the Remand under 37 CFR 1.193(b)(1) by the Board of Patent Appeals and Interferences on 10/16/2003, a supplemental Examiner's Answer is set forth below: The previous obviousness type double patenting rejection (cites In re Schneller) has been withdrawn and a new obviousness-type double patenting rejection is applied.

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This is in response to appellant's brief on appeal filed May 23, 2000 and the REMAND OF APPEAL dated 10/16/2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

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(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-2, 4-17, 22-42 do not stand or fall together except, claims 2 and 4 stand or fall with claim 1,, claim 15 stands or falls with claim 12, claim 23 stands or falls with claim 22, and claim 30 stands or falls with claim 29, and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,859,629	TOGNAZZINI	1-1999
5,365,254	KAWAMOTO	11-1994
4,042,777	BEQUAERT ET AL.	8-1977
5,111,005	SMITH ET AL.	5-1992

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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2. Claims 1-2, 4-17 and 35-41 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 5,859,629 in view of Kawamoto (US Patent No. 5,365,254).

Claim 37 is a most comprehensive claim among a group of claims 7-17 and 35-37. A detail of side by side comparison between patented claim 2 and claim 37 of this application is provided below:

Claim 2 of US Patent No. 5,859,629	claim 37 of instant application
a method of providing user controlled inputs to a computer, the method comprising the steps of:	a keyboard having an integrated touch input device , said keyboard comprising:
	a housing supporting a plurality of keys, said housing having a top face, a bottom face, and left and right edges; and
contacting a strip of touch sensitive material by hand;	a first linear touch input device for providing user controlled inputs, said linear touch input device located adjacent to at least one of said left and right edges on said top face and comprising:

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	a strip of touch sensitive material , said strip having a substantially constant width and a length which is at least twice said width; and
in response to said contact , converting the position of said contact into a data signal indicating the position of said contact along the length of said strip and wherein the step of transposing includes transposing the pressure of contact and wherein said data signal also indicates the pressure of said contact	an interface, connecting said strip to a computer and responsive to human contact with said strip in order to transpose to the position and pressure value of said contact into a data signal indicating the position of said contact along the length of said strip and to output said data signal.
	wherein said substantial constant width is approximately the width of a human finger

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activating one or more touch keys substantially simultaneously with contacting said strip of touch sensitive material to change the meaning of said data signal;	wherein said linear touch input device further comprises a number of touch keys or buttons and wherein said data signal also indicates the selection of one or more said touch keys or buttons
Outputting said data signal to a bus of said computer, wherein selection of said touch keys modifies a granularity of movement controlled by said strip of touch sensitive material	wherein selection of said touch keys or buttons modifies a granularity of movement controlled by said strip of touch sensitive material.

From the side by side comparison above, it is noted that the patented claim 2 is a method claim and claim 37 of the instant application is an apparatus claim. However, The apparatus claim and the method claim are not patentably distinct from each other because the apparatus structure in claim 37 would perform the method as recited in claim 2, and vice versa, the method step in claim 2 would include the apparatus structures to support the steps. Furthermore, from the above side by side comparison, it is noted that the claim 37 defers from the claim 2 as follows:

(1) claim 37 of this application recites “a keyboard” and patented claim 2 recites “user controlled input”. However, the difference is not patentably distinct because a keyboard is one kind of known user controlled input device which can input the data to a computer by a user.

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(2) claim 37 of this application recites” an integrated touch input device” and “a first linear touch input device comprising a **strip of touch sensitive material**” and patented claim 2 recites “**a strip of touch sensitive material.**” These differences are not patentably distinct because it is inherent that the strip of touch sensitive material is part of the input device and it must be integrated into the input device in order to be stable within the input device. Furthermore, a strip of touch sensitive material could be the linear touch input device because a strip is defined as being a long and narrow pieces which could be linear.

(3) claim 37 of this application recites “a housing supporting a plurality of keys, said housing having a top face, a bottom face, and left and right edges” and patented claim 2 recites “one or more touch keys” but fails to mention the housing structure. Also, claim 37 recites “said linear touch input device located adjacent to at least one of said left and right edges on said top face and comprising a strip of touch sensitive material, said strip having a substantially constant width and a length which is at least twice said width”, and “wherein said substantial constant width is approximately the width of a human finger.” The patented claim 2 is silent in what the location of the touch strip is and what the size of the touch strip is. Kawamoto is cited to teach a keyboard having an integrated touch input device, the keyboard comprising; a housing supporting a plurality of keys (14, 18), , the housing having a top face, bottom face, and left and right edge, and a linear touch input device (e.g. 13) located adjacent to at bottom edges on said top face; and a strip of touch sensitive material (13) having a **substantially constant width and a length which is at least twice the width and the substantially constant width is approximately the width of a**

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human finger (see col. 2, lines 55-61). It would have been obvious to one of ordinary skill in the art to have added the features of the linear touch input device with the finger size of the linear touch input device for a keyboard as taught by Kawamoto into the patented claim 2 because both patented claim 2 and Kawamoto teach the use of a touch sensitive strip area and further the finger size of the touch strip of Kawamoto can provide most effective touch area for finger input without taking too much space. Furthermore, it would have been obvious to reposition the linear touch input device to be located at the left edge of the top face so that the cursor position in the vertical direction could also be controlled.

(4) claim 37 of this application recites “an interface connecting said strip to a computer and responsive to human contact with said strip” and the patented claim 2 recited “providing user controlled inputs to a computer”. The above difference is not patentably distinct because it is inherent to have utilized an interface connected between the input device and a computer because all computers and input devices require an interface so that the input data from the touch strip can be recognized by the computer in an organized manner.

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Claims 40 and 41 are most comprehensive claims among a group of claims 1-2, 4-6 and 38-41. A detail of side comparison between patented claim 2 and claims 40 and 41 of this application is provided below:

Claim 2 of US Patent No. 5,859,629	claim 40 of instant application	claim 41 of instant application
a method of providing user controlled inputs to a computer, the method comprising the steps of:	an input device for providing user controlled inputs , comprising:	an input device for providing user controlled inputs , comprising:
contacting a strip of touch sensitive material by hand;	a strip of touch-sensitive material sensitive to a range of pressure values, said strip having a substantially constant width and a length which is at least twice said width; and	a strip of touch-sensitive material sensitive to a range of pressure values, said strip having a substantially constant width and a length which is at least twice said width; and

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<p>in response to said contact, converting the position of said contact into a data signal indicating the position of said contact along the length of said strip and wherein the step of transposing includes transposing the pressure of contact and wherein said data signal also indicates the pressure of said contact.</p>	<p>an interface, connecting said strip to a computer and responsive to human contact with said strip in order to transpose to the position and pressure value of said contact into a data signal and to output said data signal.</p>	<p>an interface, connecting said strip to a computer and responsive to human contact with said strip in order to transpose to the position and pressure value of said contact into a data signal and to output said data signal.</p>
<p>activating one or more touch keys substantially simultaneously with contacting said strip of touch sensitive material to change the meaning of said data signal; and</p>	<p>a second strip of touch sensitive material, wherein said first and a second strips of touch sensitive control input in one dimension;</p>	<p>a second strip of touch sensitive material, wherein said first and a second strips of touch sensitive control input in one dimension;</p>

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outputting said data signal to a bus of said computer, wherein selection of said touch keys modifies a granularity of movement controlled by said strip of touch sensitive material	wherein one of said first and second touch sensitive input strips controls granularity of the other of said first and second touch sensitive input strips.	At least one key that when activated simultaneous to activation of either touch sensitive input strip controls granularity of input.
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From the side by side comparison above, it is noted that the patented claim 2 is a method claim and claims 40 and 41 of the instant application is an apparatus claim. However, The apparatus claim and the method claims are not patentably distinct from each other because the apparatus structure in claims 40 and 41 would perform the method as recited in claim 2, and vice versa, the method step in claim 2 would include the apparatus structures to support the steps. Furthermore, from the above side by side comparison, it is noted that the claims 40 and 41 defers from the claim 2 as follows:

(1) claims 40 and 41 recite “a strip of touch-sensitive material sensitive to **a range of pressure values**” and “to transpose to the position and pressure value of said contact into a data signal and to output said data signal”. The patented claim 2 recites “contacting a strip of touch sensitive material by hand”, “converting the position of said contact into a data signal indicating the position of said contact along the length of said strip”, and “transposing (which is treated as

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“converting”) the pressure of contact and wherein said data signal also indicates the pressure of said contact.” These differences between the patented claim 2 and the claims 40, 41 of this application are not patentably distinct because it is inherent that the touch sensitive material is sensitive to a range of pressure values (e.g. touch or untouch). For example, in a most simple case, a range of pressure values are 1 and 0. The value data 1 could represent the contact is detected or the contact is above a threshold pressure value. On the other hand, the value data 0 could represent no contact is detected or the contact is below a threshold pressure value.

(2) Claims 40 and 41 of this application recite “said strip having a substantially constant width and a length which is at least twice said width.” The patented claim 2 is silent in what the size of the touch strip is. Kawamoto is cited to teach touch sensitive input device including a strip of touch sensitive material (13) having a **substantially constant width and a length which is at least twice the width** (see col. 2, lines 55-61). It would have been obvious to one of ordinary skill in the art to have added the features of the linear touch input device with the finger size of the linear touch input device for a keyboard as taught by Kawamoto into the patented claim 2 because both patented claim 2 and Kawamoto teach the use of a touch sensitive strip area and further the finger size of the touch strip of Kawamoto can provide most effective touch area for finger input without taking too much space.

(3) claims 40 and 41 of this application recites “an interface connecting said strip to a computer and responsive to human contact with said strip” and the patented claim 2 recited “providing user controlled inputs to a computer”. The above difference is not patentably distinct

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because it is inherent to have utilized an interface connected between the input device and a computer because all computers and input devices require an interface so that the input data from the touch strip can be recognized by the computer in an organized manner.

(4) Claim 40 recites “**a second strip** of touch sensitive material, wherein said first and a second strips of touch sensitive control input **in one dimension**”, and “wherein **one of said first and second touch sensitive input strips** controls granularity of the other of said first and second touch sensitive input strips”. The patented claim 2 recites “wherein selection of said touch keys modifies a granularity of movement controlled by said strip of touch sensitive material” but fails to mention the touch strip is a one dimension touch strip and also fails to mention a second strip of touch sensitive material for controlling granularity of the first strip. However, the above difference is not patentably distinct. Kawamoto is cited to teach a touch input device including a strip of touch sensitive material (13) in one dimension (e.g. horizontal direction). Also, Kawamoto discloses a second strip of touch sensitive material (14) for a fine adjustment curser movement in one dimension (e.g. horizontal dimension). It would have been obvious to have used the one dimension touch strip control input of Kawamoto for the patented claim 2 because the one dimensional touch strips of Kawamoto provides a simple way for controlling a cursor movement in one dimension. Furthermore, it would have been obvious to one of ordinary skill in the art to have substituted the second strip of Kawamoto for the touch keys in the patented claim 2 since the second strip of Kawamoto functions in a similar way as a touch key for modifying the movement of the first strip.

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(5) Claim 41 of this application recites “**a second strip** of touch sensitive material, wherein said first and a second strips of touch sensitive control input **in one dimension**” and “at least one key that when activated simultaneous to activation of either touch sensitive input strip controls granularity of input”. The patented claim 2 recites “activating one or more touch keys substantially simultaneously with contacting said strip of touch sensitive material” and “wherein selection of said touch keys modifies a granularity of movement controlled by said strip of touch sensitive material” but fails to mention the touch strip is one dimension touch strip and also fails to mention a second strip of touch sensitive material. However, the above difference is not patentably distinct. Kawamoto is cited to teach a touch input device including a first strip of touch sensitive material (13) for controlling the cursor movement in one dimension (e.g. horizontal dimension), and also a second strip of touch sensitive material (14) for controlling a fine adjustment cursor movement in one dimension (e.g. horizontal dimension). It would have been obvious to have used the one dimension touch strip control input of Kawamoto for the patented claim 2 because the one dimensional touch strips of Kawamoto provides a simple way for controlling a cursor movement in one dimension. Furthermore, it would have been obvious to add a second touch strip of Kawamoto into the patented claim 2 because the second touch strip of Kawamoto can provide an additional control such as a fine adjustment of cursor movement.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-5, 7-11, 35-36, 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamoto (U.S. Patent No. 5,365,254).

As to claims 1, 7, 35-36, 38-39, Kawamoto discloses an input device for providing user controlled inputs, comprising: a strip of touch sensitive material (13) sensitive to a range of pressure (e.g. zero pressure or pressure), strip having a substantially constant width and a length which is at least twice the width (see Fig. 3, item 13); and interface (21, Fig. 4) connecting strip to a computer and responsive to human contact with the strip in order to transpose the position and pressure value of the contact into a data signal and to output the data signal (see 2, lines 51-67).

As to claims 2, 8, Kawamoto discloses that the interface does not transpose the widthwise of the contact and the data signal does not indicate the widthwise position of the contact (e.g. the touch zones positioned along the length).

As to claims 4, 10, Kawamoto discloses that the substantially contact width is approximately the width of a human finger (column 2, lines 56-57).

As to claims 5 and 11, Kawamoto discloses that the linear touch input device further comprises a number of touch keys or buttons (14, 16, 17).

As to claim 9, Kawamoto discloses the contact involving the pressure.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 12-17, 22-26, 28-33 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto (U.S. Patent No. 5,365,254) in view of Bequaert (U.S. Patent No. 4,042,777).

As to claims 6, 12-17 and 42, it is noted that Kawamoto does not disclose the number of keys or buttons is four and wherein said keys or buttons are located on said linear touch input device in a position so as to be operable by the fingers of a hand while said strip of touch sensitive material is simultaneously touched by the thumb of the hand. Bequaert discloses a touch input device comprises four keys (finger section) and a strip (thumb section) both can be touched simultaneously. It would have been obvious to one of ordinary skill in the art to have modified the input device of Kawamoto with the features of keys arrangements and simultaneously touched as taught by Bequaert, because the simultaneously touched of input keys can input more characters by using less keys.

As to claims 22-23, 25-26, 29-30, 32, it is noted that Kawamoto does not disclose a keyboard having a plurality of alphanumeric keys and linear touch input device being integrated with the keyboard. Bequaert is cited to teach the touch input device can be integrated with keyboard for inputting characters. It would have been obvious to have integrated a keyboard of

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Bequaert into the touch input device of Kawamoto because Bequaert's Keyboard can provide additional functions such as inputting alphanumeric data to the screen so that the user can do both cursor control and inputting characters.

As to claims 24, 31, Kawamoto discloses that the processor controls scrolling of the display in accordance with the input data signal (e.g. cursor scrolling).

As to claim 28, it is well known in the art that any computer system can be connected to network. It would have been obvious to one of ordinary skill in the art to have connected the computer system of Kawamoto to the network, so that the user can interactive with other users.

As to claim 33, Kawamoto discloses the input device is a pointing device (e.g. controlling cursor movement).

7. Claims 27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto (U.S. Patent No. 5,365,254) in view of Bequaert (U.S. Patent No. 4,042,777) as applied to claims 22-26 and 29-33 above, and further in view of Smith et al (U.S. Patent No. 5,111,005).

It is noted that both Kawamoto do not discloses the pointing device comprises a two-dimensional pointing device and computer program includes a routine for processing the signal from two-dimensional pointing device with the input data signal to generate a three-dimensional input signal. Smith is cited to teach a touch pointing device which can generating either two-dimensional input signal or three-dimensional input signal. It would have been obvious to one of ordinary skill in the art to have modified Kawamoto as modified with the features of multi-

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dimensional input control as taught by Smith, so that the user can use the pointing device in a three-dimensional display.

(11) *Response to Argument*

With respect to the argument of the double patenting rejection, please see the newly applied obvious-type double patenting rejection above.

Applicant argues that Kawamoto teaches detecting position but does not teach or suggest measuring the levels of pressure applied by the user at the position. This argument is not persuasive because Kawamoto clearly teach that the touch area can detect the pressure applied by the user and the touch position of the touch area. The range of pressure values can be considered as two values such as 0 and 1 (e.g. "0" represents pressure below the threshold pressure and "1" represents pressure above the threshold pressure). Thus, Kawamoto clearly teaches "a range of pressure values" as recited in claim 1. The limitation of "a range of pressure value" is not only anticipated by Kawamoto, but also is well known in the art as admitted by applicant (see page 6, line 25 and page 7, line 1 of applicant's specification).

With respect to claim 5, applicant argues that the elements 14, 16 and 17 of Kawamoto are referred to "touch screen keys" which are not the same as the key or buttons of claim 5 because the claim states that the keys are in addition to the touch sensitive strips. This argument is not persuasive because claim 5 does not require "keys are in addition to the touch sensitive strips" as argued by applicant. Claim 5 only requires "said input device further comprises a

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number of keys or buttons and wherein said data signal also indicates the selection of one or more of said keys or button". Since the elements 14, 16, 17 of Kawamoto are keys and generates data signal, claim 5 is clearly met by Kawamoto.

With respect to claims 38, 17, Kawamoto discloses a second strip of touch sensitive material (16, 17, Fig. 3 and 23, Fig. 4).

With respect to claims 39, 36, Kawamoto discloses a two-dimensional input. For example, element 13 controls the cursor movement in horizontal direction. Elements 16 and 17 controls a vertical zooming direction.

With respect to claims 7, 11, 35, applicant argues that Kawamoto has sensitive material on a graphical display screen which is not a keyboard. This argument is not persuasive because the device of Kawamoto is an integrated device comprises display area and key input area. Thus, Kawamoto's device is also a keyboard device.

With respect to claim 8, applicant argues claim 8 recites "signal does not indicate the widthwise position of said contact which is not shown by the reference because the reference does not show a signal from a keyboard, but only a signal from a touch screen display. This argument is not persuasive because the strip 13 is not on a display area, but it is located on the key area.

With respect to claim 9, applicant argues that Kawamoto does not measure the pressure of the contact. This is not true because if Kawamoto could not measure the pressure, the cursor would not be able to moved.

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With respect to claim 10, Kawamoto clearly shows that the width of the strip 13 is approximately the width of a human finger.

With regarding to the 103 rejection, applicant argues that the combination of Kawamoto and Bequaert is not proper because Bequaert is directed to a keyboard and Kawamoto is directed to a display device that will not function if the touch area is moved to keyboard. This argument is not persuasive because Kawamoto is not only a simple display device but it also comprises key input area functioning as keyboard. The combination of Kawamoto and Bequaert would provide improvement of inputting characters in Kawamoto's device and would not defeat the purpose and change the principle of operation of Kawamoto.

With respect to claims 6, 12, 42, Bequaert teaches simultaneously touching two input areas for enhancement of inputting signals.

With respect to claim 13, Kawamoto teaches the keys (16, 17) are located on the right edge of the device.

With respect to claim 14, Kawamoto discloses the keys (14) are located on the bottom face.

With respect to claim 16, the arc shape of the strip is considered as an obvious design choice because it does not solve any stated problems or has any unexpected results.

With respect to claims 25, 32, Bequaert teaches inputting characters.

With respect to claims 26, 33, Kawamoto clearly teaches a pointing device for controlling cursor movement.

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With respect to claims 28, 29, Kawamoto clearly teaches a computer containing a linear touch input device.

With respect to claim 31, Kawamoto clearly teaches a scrolling control (e.g. scrolling the cursor on the horizontal directions by touching the strip area 13).

With respect to claims 27 and 34, Smith teaches a touch pointing device which can generating either two-dimensional input signal or three-dimensional input signal. It would have been obvious to one of ordinary skill in the art to have modified Kawamoto as modified with the features of multi-dimensional input control as taught by Smith, so that the user can use the pointing device in a three-dimensional display.

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For the above reasons, it is believed that the rejections should be sustained.

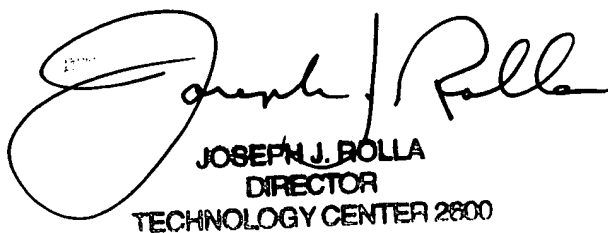
Respectfully submitted,



XIAO WU
PRIMARY EXAMINER

xw
December 19, 2003

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